

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A method, comprising code executable on a general purpose computer, of selecting a solution for optimum layout of an integrated circuit, comprising:
 - creating first and second separate populations of parent solutions;
 - combining at least one of the parent solutions from the first population with at least one of the parent solutions from the second population to create offspring solutions;
 - ~~associating~~ adding the offspring solutions ~~with~~ to the first population; and
 - selecting second-generation solutions of the integrated circuit layout for the first population from the offspring solutions and the parent solutions.
2. (original): The method of claim 1, further comprising keeping the second-generation solutions and discarding all remaining solutions in the first population.
3. (original): The method of claim 1, further comprising associating scores with each of the parent solutions and offspring solutions, and wherein the step of selecting comprises selecting the second-generation solutions based on the scores.
4. (original): The method of claim 1, further comprising combining at least one of the second-generation solutions from the first population with at least one second-generation solution from the second population.
5. (original): The method of claim 1, further comprising mutating at least one of the second-generation solutions.
6. (original): The method of claim 1, further comprising keeping the first population separate from the second population.
7. (original): The method of claim 1, wherein the step of combining comprises combining each of the parent solutions in the first population with at least one of the parent solutions in the second population.
8. (currently amended): A computer-readable medium having computer-executable instructions for performing a method on a computer for selecting solution for optimum layout of an integrated circuit, the method comprising:
 - combining at least one parent solution from a first population with at least one parent solution from a second population to create offspring solutions;
 - associating the offspring solutions with the first population; and
 - selecting second-generation solutions of the integrated circuit layout for the first population from the offspring solutions and the first population parent solutions.

9. (original): The medium of claim 8, wherein the method further comprises keeping the second-generation solutions and discarding all remaining solutions in the first population.
10. (currently amended): The medium of claim 8, wherein the method further comprises associating scores with each of the parent solutions and offspring solutions, and wherein the step of selecting comprises selecting the second generation solution based on the scores.
11. (original): The medium of claim 8, wherein the method further comprises combining at least one of the second-generation solutions from the first population with at least one second-generation solution from the second population.
12. (original): The medium of claim 8, wherein the method further comprises mutating at least one of the second-generation solutions.
13. (original): The medium of claim 8, wherein the method further comprises keeping the first population separate from the second population.
14. (original): The medium of claim 8, wherein the step of combining comprises combining each of the parent solutions in the first population with at least one of the parent solutions in the second population.
15. (currently amended): A computer system comprising:
 - a storage medium; and
 - a processor for executing a software program stored on the storage medium for selecting a solution for optimum layout of an integrated circuit, the software program comprising a set of instructions for:
 - combining at least one parent solution from a first population with at least one parent solution from a second population to create offspring solutions;
 - associating the offspring solutions with the first population; and
 - selecting second-generation solutions of the integrated circuit layout for the first population from the offspring solutions and first population parent solutions.
16. (original): The system of claim 15, wherein the set of instructions further comprises a set of instructions for keeping the second-generation solutions and discarding all remaining solutions in the first population.
17. (previously presented): The system of claim 15, wherein the set of instructions further comprises a set of instructions for associating scores with each of the parent solutions and offspring solutions, and wherein the step of selecting comprises selecting the second generation solutions based on the scores.

18. (original): The system of claim 15, wherein the set of instructions further comprises a set of instructions for combining at least one of the second-generation solutions from the first population with at least one second-generation solution from the second population.

19. (original): The system of claim 15, wherein the set of instructions further comprises a set of instructions for mutating at least one of the second-generation solutions.

20. (original): The system of claim 15, wherein the set of instructions for combining comprises combining each of the parent solutions in the first population with at least one of the parent solutions in the second population.